Complete Summary

GUIDELINE TITLE

Evidence-based protocol. Exercise promotion: walking in elders.

BIBLIOGRAPHIC SOURCE(S)

Jitramontree N. Evidence-based protocol. Excercise promotion: walking in elders. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core; 2001 Feb. 53 p. [81 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Conditions or diseases that may be aggravated by a sedentary lifestyle. Examples include high blood cholesterol and triglycerides, coronary heart disease, hypertension, colon cancer, diabetes, and depression.

GUIDELINE CATEGORY

Counseling
Prevention

CLINICAL SPECIALTY

Geriatrics
Nursing
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To help health care providers in all settings enhance or maintain exercise behavior, particularly walking, of elders

TARGET POPULATION

Elders

INTERVENTIONS AND PRACTICES CONSIDERED

Exercise Promotion Assessment Tools

1. Physical Activity Stage of Change Questionnaire
2. Physical Activity Readiness Questionnaire
3. Balance Scale

Exercise Promotion Measures

1. Counseling and education based on psychosocial and physiological considerations and each of the following stages: precontemplation, contemplation, preparation, action, maintenance, and relapse
2. Implementation Tools and Educational Material
    - Exercise Manual
    - Barriers to Being Active Quiz
    - Exercise Self-Efficacy Scale
    - Pedestrian Safety Materials
    - Weight Bearing Exercise
    - How to Walk and Tips for Safety
    - Borg Scale
    - Graph Representing Duration of Daily Walk
    - Walking Speed Assessment
3. Identifying and preventing relapses in walking program

MAJOR OUTCOMES CONSIDERED

- Overall physical and mental health and quality of life
- Reduce risk of premature death
- Behavior changes in relation to physical activity

- Sensitivity and specificity of screening and assessment instruments

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Library computer searches were conducted via MEDLINE, CINAHL, PsychINFO, Health and Psychosocial instruments, and government documents.

NUMBER OF SOURCE DOCUMENTS

200

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The evidence in this protocol is based upon research studies that included older adult populations.

Evidence Grading

A. Evidence from well-designed meta-analysis.
B. Evidence from well-designed controlled trials, both randomized and nonrandomized, with results that consistently support a specific action (e.g., assessment, intervention or treatment).
C. Evidence from observational studies (e.g., correlational, descriptive studies) or controlled trials with inconsistent results.
D. Evidence from expert opinion or multiple case reports.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Reviewed by series editor Marita G. Titler, PhD, RN, FAAN and content experts Kenneth Mobily, PhD and Wayne H. Osness, PhD.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The grades of evidence (A-D) are defined at the end of the "Major Recommendations" field.

Individuals at Risk for Needing Exercise Promotion

- Adults older than 45 years
- Female adults, especially women of low educational attainment
- African American and Hispanic adults
- Adults with sedentary life styles (participating in fewer than three 20-minute sessions of leisure-time physical activity per week excluding their usual job-related physical activity)
- Adults with health problems that are not the barriers of exercise as approved by their physicians

Assessment Criteria

The following assessment instruments indicate elders who are likely to benefit the most from use of this evidence-based protocol. Assessment criteria for exercise promotion includes three separate instruments, each of these are discussed in the original guideline document.

- Physical Activity Stage of Change Questionnaire (Evidence Grade = B) (see Appendix A1 in the original guideline document)
- Physical Activity Readiness Questionnaire (Evidence Grade = B) (see Appendix A2 in the original guideline document)

- Balance Scale (Evidence Grade = B) (see Appendix A3 in the original guideline document)

After evaluating the elders´ physical activity stage change, physical activity readiness, and balancing ability, health care providers should enhance the elders to exercise by using the following criteria:

1. For physical activity stage of change, appropriate interventions for elders in each stage are recommended in the description of the practice section.
2. For physical activity readiness, if the elders respond "yes" to one or more items, they should talk to their physicians before starting exercise. If the elders answer "no" to all questions, they can start to exercise gradually.
3. For ability to balance, the lower the elder´s score (maximum = 56) the more careful the elders should be while they are exercising.

Description of the Practice

Exercise promotion should be based on psychosocial as well as physiological considerations (Quinney, Gauvin, & TedWall, 1994). Interventions for enhancing exercise behavior should be developed for individuals in each stage of change (Marcus et al., 1992, 1994; Ingledeiv, Markland, & Medley, 1998; Nigg & Courneya, 1998) (Evidence Grade = B) as follows.

Precontemplation Stage

Precontemplators include those who are not active, and currently have no intentions of being active. These people do not think about starting exercise within the next 6 months. Actions for elders in this stage include:

- Increase awareness of their activity level by assessing activity in daily life, for example, ask them to record their activities in a diary and discuss with them about their activity level. Help them understand how their current behavior influences them personally and others. Also, increase awareness of what they might miss if they continue to be sedentary (Burbank, Padula, & Nigg, 2000) (Evidence Grade = D). For example, inactive parents model an unhealthy behavior to their children (USDHHS, 1999) (Evidence Grade = D).
- Provide information about benefits of exercise (Slava, Laurie, & Corbin, 1984; Resnick & Spellbring, 2000) (Evidence Grade = C) and clarify the misconceptions of myths associated with exercise such as injury, excessive muscle hypertrophy, and fatigue (USDHHS, 1999) (Evidence Grade = D). For example, provide them an exercise manual from the U.S. National Institute on Aging (to request the manual see Appendix B1 in the original guideline document), and/or have them talk to those who enjoy exercising.
- Emphasize the short-term benefits such as feeling better about oneself, sleeping better, and enjoyment. Do not overemphasize the benefits of exercise as health-related fitness because it may turn exercise into a chore(Corbin & Pangrazi, 1999) (Evidence Grade = D).
- Link benefits of a physically active lifestyle to valued people (White & Maloney, 1990) (Evidence Grade = C). For example, identify who is the most significant person in their life. Then let them know that if they stay healthy, they will be able to spend quality time with their loved one e.g., participating in their grandchild´s graduation ceremony.

Contemplation Stage

Contemplators are individuals who do not exercise, but do intend to start exercising within the next 6 months. They are not ready to initiate the action because they are in the process of weighing the pros and cons. Consequently, they are ambivalent about engaging in exercise behavior. Actions for contemplators are:

- Assess their barriers to exercise (see Appendix B2 in the original guideline document); then discuss how to overcome those problems (Whetstone & Reid, 1991; Murdaugh & Hinshaw, 1986) (Evidence Grade = C).
- Assess their exercise efficacy (see Appendix B3 in the original guideline document) and provide motivating messages such as "good job" or "you´re doing great" to enhance self-confidence (USDHHS, 1999) (Evidence Grade = D).
- Provide awareness about walking options such as using stairs, walking to church, or shopping (U.S. Department of Transportation, 1994) (Evidence Grade = C). Encourage them to choose to walk and view these options as personally and socially desirable. Provide them information about pedestrian safety (see Appendix B4 in the original guideline document).
- Provide choices (Mullan & Markland, 1997) (Evidence Grade = C) of home-based exercise program such as stretching exercises, joint rotation, and weight bearing exercises (see Appendix B5 in the original guideline document) (King et al., 1991; Juneau, Roger, De Santos at al,. 1987) (Evidence Grade = B).
- Provide community resource lists (Sallis et al., 1990) (Evidence Grade = C) so that the elderly have an option to participate with others. The lists include senior centers, recreation centers, physical activity-related clubs, organizations, or events. Also provide information about places to walk such as open spaces and parks, shopping malls, widened sidewalks, auto-restricted zones, and amenities such as benches, signs, and fountains.
- Help them with basic skills such as selecting appropriate shoes, and clothing (USDHHS, 1999) (Evidence Grade = D).

Preparation Stage

Individuals in the preparation stage include those who intend to exercise in the near future, usually within the next month. They may begin exercise, but less often and with less intensity than recommended. They may be uncertain about the outcomes of their activity, Interventions include:

- Provide information about how to walk and safety considerations (Marcus et al., 1992) (Evidence Grade = B) (see Appendix B6 in the original guideline document), including the minutes and distance one should walk (Howze, Smith, & DiGilio, 1989) (Evidence Grade = C).
- Strengthen their exercise efficacy (Resnick & Spellbring, 2000; Conn, 1997, 1998; Schuster, Petosa, & Petosa, 1995) (Evidence Grade = C) by:
    a. Facilitating a progressive walking program and encouraging celebration of successes (Long & Haney, 1988; Long, 1984; Jasnoski et al., 1981) (Evidence Grade = B). Provide self-monitoring methods that help them visualize progress. They may record time spent walking each day in a graph or chart (see Appendix B8 in the original guideline document),

or record steps walked each day by using a pedometer (step counter). There are computerized tracking systems which record time spent participating in walking clubs. Participants may watch their weight as a criterion for success. Experiencing physiological changes such as decreased fatigue also strengthens their self-efficacy (Stretcher et al., 1986) (Evidence Grade = C).

b. Emphasizing individual competence and accomplishment by employing recognition (of exercise participation and mastery) strategy rather than using extrinsically focused traditional award based on fitness assessment (Fitness Canada, 1992; Prudential FITNESSGRAM, 1992) (Evidence Grades = D).
c. Promoting competence perceptions by reinforcing the personal progress that has been made (Weinberg & Jackson, 1979; Whitehead & Corbin, 1991) (Evidence Grade = C).
d. Providing them a video of a good model of the elder walker (Reeve, 1996) (Evidence Grade = D). (optional)
e. Establishing a group tour to observe an elder walking program (Reeve, 1996) (Evidence Grade = D). (optional)
f. For group exercise, assign individuals to groups on the basis of their confidence and ability levels (Howze, Smith, & DiGilio, 1989) (Evidence Grade = D).

- Help them establish short-term goals and emphasize small, specific, and realistic goals (Resnick & Spellbring, 2000) (Evidence Grade = C) such as "I will walk for 10 minutes every day."
- Encourage them to make a commitment by sharing their intention with another person to confirm their decision (Howze, Smith, & DiGilio, 1989) (Evidence Grade = C).
- Promote exercise as an enjoyable activity (Corbin & Pangrazi, 1999; USDHHS, 1999) (Evidence Grade = D).
- Foster social support from spouse, family members, friends, neighbors, and co-workers (O'Brien Cousins, 1993; Barris, 1987; Martin et al., 1984) (Evidence Grade = C). Get spouse and family members involved by assessing their attitudes, discussing progress elders have made, and giving examples of reinforcing constructive feedback. Encourage them to walk with family, friends, neighbors, coworkers, or significant others.
- Discuss barriers to regular activity and elicit ways to overcome those obstacles (USDHHS, 1999) (Evidence Grade = D).
- Inform them about the temporary nature of unpleasant sensations (Resnick & Spellbring, 2000) (Evidence Grade = C) such as muscle aches, joint pain, shortness of breath, fear of falling, and feeling bored. Help them to decrease or eliminate these unpleasant symptoms (Schneider, 1997; Resnick, 1998) (Evidence Grade = C) such as administering medication prior to exercise, applying ice to areas of pain, or wearing better support shoes to relieve pain. Individuals apprehensive about falling should be encouraged to walk with their usual assistive devices or walk with a partner.

Action Stage

This stage includes individuals who currently exercise regularly, but have started doing so recently (within the past 6 months). Individuals in the action stage are prone to relapse to old patterns of behavior. Interventions for people in the action stage are:

- Continue to provide positive, constructive feedback to enhance their self-efficacy (Weinberg & Jackson, 1979; Whitehead & Corbin, 1991) (Evidence Grade = C). For example, outstanding participants can be acknowledged in the newsletters or monthly lists.
- Increase walking speed (Pratt, Chasteen, & Abrams, 1994) (Evidence Grade = C) with weight bearing exercises (see Appendix B5 in original guideline document) (Sherrington & Lord, 1997) (Evidence Grade =B). Walking speed in the older adult should be greater than 1 meter per second or at least 1.22 meter per second to cross the street safely (Nelson et al., 1991; Hoxie & Rubenstein, 1994) and live independently (Langlois et al., 1997; Imms & Edholm, 1981; Leiper & Craik, 1991; Guralnik et al., 1994; Potter, Evan, & Duncan, 1995) (Evidence Grade = C). The average walking speed in the older adults is between 0.9 and 1.3 meter per second (Nelson et al., 1991; Duncan et al., 1992) (Evidence Grade = C). (See Appendix B9 in the original guideline document for Walking Speed Assessment to measure walking speed).
- Assist them in developing a long-term goal for exercise (Resnick & Spellbring, 2000) (Evidence Grade = C) such as "I will participate in a two-mile walk this Spring".
- Assist them to identify potential reasons to relapse (Marcus & Stanton, 1993) (Evidence Grade = C) such as risk of injury, boredom, and failure to meet goal (e.g. bad weather, occasional illness, out-of town visitors). Discuss solutions for anticipated barriers and develop alternative plans for missing events. For example, try a new place for walking. Inform them that a relapse does not mean failure, but is a normal part of the change process. Decrease potential excuses by planning for convenience such as keeping walking shoes and clothes easy to reach, and posting motivating messages on the refrigerator or mirror.
- Encourage them to foster group cohesion through developing a buddy system (Quinney, Gauvin, & TedWall, 1994) (Evidence Grade = D). For example, enhance relationships by establishing monthly socials.
- For elders exercising at home, visit their home to help them organize and maintain their activity, or biweekly phone conversations to discuss their progress, and offer support and guidance for relapse prevention (King et al., 1988) (Evidence Grade = C).
- Remind them to reward themselves for success. For instance, buy a new pair of walking shoes or a new audio tape, or taking a short trip (USDHHS, 1999) (Evidence Grade = D).

Maintenance Stage

Individuals in this stage have successfully exercised for more than 6 months. They still continue to exercise regularly. Interventions should be tailored to:

- Remind them to recognize and appreciate their success (Resnick & Spellbring, 2000) (Evidence Grade = C). Continue to provide them positive reinforcement, for example, "you look very energetic".
- Provide opportunities to serve as a role model such as helping others in similar situations. This will motivate them to continue their exercise program (USDHHS, 1999) (Evidence Grade = D).
- Continue to make it fun and entertaining such as walking with favorite music, or having conversations with friends before, during and after walking (USDHHS, 1999; Corbin & Pangrazi, 1999) (Evidence Grade = D).

- Maintain a supportive environment such as encouragement from family members (O'Brien Cousins, 1993; Barris, 1987; Martin et al., 1984) (Evidence Grade = C).
- Assure them their goals are realistic to prevent discouragement and to prevent injury by overexerting themselves (Resnick & Spellbring, 2000) (Evidence Grade = C).

Relapse

Individuals engaging in an active lifestyle may go back to an earlier stage of change. Interventions for people in Relapse are not the same as those for people just beginning to change their behavior. Individuals in this stage are more likely to start their activity again. Actions include:

- Assessment of their stage of relapse with a question "Was there a time in the recent past when you were regularly active for at least 3 months?" (USDHHS, 1999) (Evidence Grade = D).
- Learning from them how they overcame barriers to exercise and sustained their activity in the past (USDHHS, 1999) (Evidence Grade = D).
- Identifying causes of relapse and discuss ways to overcome and prevent its recurrence. Assist them to identify factors that can be of help, and identify those factors that can hinder program maintenance (USDHHS, 1999). (Evidence Grade = D). For example, inclement weather may prevent elders from regular exercise. Alternatives may include to walk in a mall, a gym, or other places with warmer temperatures.

Definitions:

Evidence Grading

A. Evidence from well-designed meta-analysis.
B. Evidence from well-designed controlled trials, both randomized and nonrandomized, with results that consistently support a specific action (e.g., assessment, intervention or treatment).
C. Evidence from observational studies (e.g., correlational, descriptive studies) or controlled trials with inconsistent results.
D. Evidence from expert opinion or multiple case reports.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Regular walking in elders can improve health, enhance independent living, increase overall quality of life and reduce the risk of premature death in the following ways as it:

- Lowers the risk of developing hypertension (or reduces blood pressure), Type II diabetes mellitus, colon cancer, and coronary heart disease (or second heart attack)
- Lowers blood cholesterol and triglycerides and may increase high-density lipoproteins (HDL)
- Reduces depressive symptoms
- Promotes psychological well-being
- Helps build and maintain healthy body weight, bones, muscles, and joints
- Helps older adults become stronger and better able to be active without falling or becoming excessively fatigued

Subgroups Most Likely to Benefit:

Individuals at higher risk for conditions or diseases that may be aggravated by a sedentary lifestyle are more likely to benefit from this clinical practice guideline.

POTENTIAL HARMS

There is a low risk of orthopedic injury from falls while walking.

Subgroups Most Likely to be Harmed:

Individuals with poor balance are more likely to fall.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This evidence-based practice protocol is a general guideline. Patient care continues to require individualization based on patient needs and requests.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

In order to evaluate the use of this protocol among elders at risk and in need of exercise promotion, both process and outcome factors should be evaluated.

Process Factors

Process factors are those interpersonal and environmental factors that can facilitate the use of a protocol.

One process factor that can be assessed with a group of nurses/physicians is their knowledge about Exercise Promotion. The Exercise Promotion Knowledge Assessment Test (see Appendix C in the original guideline document) should be assessed before and following the education of staff for use of this protocol.

The same group of nurses/physicians to whom the Knowledge Assessment Test was given should also be given the Process Evaluation Monitor (see Appendix D in the original guideline document) approximately one month following their use of the protocol. The purpose of this monitoring device is to determine their understanding of the protocol, and to assess their support of utilizing the protocol.

Outcome Factors

Outcome factors are those expected to change or improve from consistent use of the protocol. The major outcome factors that should be monitored over time are:

- Intensity of walking (very light – very hard)
- Duration of walking (minute/day)
- Frequency of walking (day/week)

The Exercise Promotion Outcomes Monitor described in Appendix E in the original guideline document is to be used for monitoring and evaluating the usefulness of the exercise promotion protocol in improving exercise behavior of elders. Please use this monitor on a weekly basis throughout the exercise promotion program for each elder. Adapt this outcome monitor to your organization or unit and add outcomes you believe are important.

IMPLEMENTATION TOOLS

Patient Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Jitramontree N. Evidence-based protocol. Excercise promotion: walking in elders. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core; 2001 Feb. 53 p. [81 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Feb

GUIDELINE DEVELOPER(S)

University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core - Academic Institution

SOURCE(S) OF FUNDING

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GUIDELINE COMMITTEE

University of Iowa Gerontological Nursing Interventions Research Center Research Dissemination Core

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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Series Editor: Marita G. Titler, PhD, RN, FAAN

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242. For more information, please see the University of Iowa Gerontological Nursing Interventions Research Center Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Exercise promotion: consumer information. University of Iowa College of Nursing, Research Dissemination Core. 2001 Oct. 2 p.

Print copies: Maria Titler, PhD, RN, FAAN, University of Iowa, College of Nursing Director, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242-1100; telephone: (319) 384-4429; fax: (319) 353-5843; e-mail: research-dissemination-core@uiowa.edu.

NGC STATUS

This summary was completed by ECRI on February 6, 2002. The information was verified by the guideline developer as of March 13, 2002.

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